Abstract Submitted
for the DAMOP09 Meeting of
The American Physical Society

Application of the Velocity Map Imaging Technique for Low Kinetic Energy Photoelectrons EDDIE C. RED, Lawrence Berkeley National Laboratory, Advanced Light Source, Berkeley, CA, USA, ANTONIO M. JUÁREZ, Instituto de Ciencias Físicas, Universidad Nacional Autónoma de México, MEXICO, MATTHIAS HOENER, LBNL - ALS/ Physics Department, Western Michigan University, Kalamazoo, MI, USA, DANIEL ROLLES, Max Planck Advanced Study Group, Center for Free Electron Laser Science, Hamburg, GERMANY, ALEJANDRO AGUILAR, Lawrence Berkeley National Laboratory, Advanced Light Source, Berkeley, CA, USA — A modified Velocity Map Imaging (VMI) spectrometer has been used with synchrotron radiation at the Advanced Light Source at Lawrence Berkeley National Laboratory to study the photoelectron angular distributions (PADs) of near-zero kinetic energy (5 meV – 100 meV) photoelectrons. Beta asymmetry parameter measurements are a useful tool for gaining insight into the dynamics associated with electron correlation effects. "Proof of Principle" experiments were conducted near the ionization thresholds of helium and neon to test the suitability of the VMI apparatus for the measurement of PADs. Electron-ion coincidence experiments are underway to study the double photoionization of helium at energies less than 100 meV above the ionization threshold.

Eddie Red
Lawrence Berkeley National Laboratory,
Advanced Light Source, Berkeley, CA, USA

Date submitted: 06 Feb 2009 Electronic form version 1.4